



PATENT SPECIFICATION

DRAWINGS ATTACHED

1,149,628

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COMPLETE SPECIFICATION

Improvements in Sun Visors for Vehicles

We, REGIE NATIONALE DES USINES RENAULT, a French Body Corporate, of 8/10, Avenue Emile Zola, Billancourt (Hauts de Seine) France, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described and by the following statement:—

The present invention relates to a sun-visor for vehicles and concerns a safety sun-visor adapted to absorb impact shocks. A sun-visor can be particularly dangerous, since it is mounted at a point where the heads of passengers in a vehicle generally strike in case of accident. Therefore, a sun-visor in addition to its function of protection against the sun, must be fitting which can contribute to the safety of passengers in a vehicle and can play the part of a shock-absorber.

According to the present invention there is provided a vehicle safety sun-visor in the form of a panel comprising a plate-like core with an outer skin, said panel being adapted to pivot about an axis located in a first core-area and extending adjacent one edge-portion of the panel, an opposite edge-portion of the core, which extends adjacent a panel edge opposite said axis, being contained in a second core-area which is made weaker than said first core-area readily to collapse by breaking or by breaking away from said first core-area under impact, to absorb impact shock.

For a better understanding of the present invention and to show how the same may be carried into effect, reference will now be made by way of example to the accompanying drawings, in which:—

Figures 1, 2 and 3 show examples of cores of sun-visors in accordance with the invention.

Figures 4 and 5 are examples showing possible forms of the section along A—A' of [Price 4s. 6d.]

one or another of the three cores shown in Figures 1 to 3,

Figure 6 is a view in longitudinal section of a further embodiment of a sun-visor of the invention taken along the line VI—VI of Figure 7,

Figure 7 is a view in transverse section taken along the line VII—VII of Figure 6,

Figure 8 shows a plan view of part of the core of the sun-visor of Figures 6 and 7,

Figure 9 is an end view taken in the direction of the arrow IX of Figure 8,

Figure 10 shows a section along the line X—X of Figure 11 of a perforated plate element of the sun-visor of Figures 6 and 7,

Figure 11 is a view in cross-section along the line XI—XI of Figure 10,

Figure 12 shows to a larger scale the part XII enclosed in chain-dotted lines in Figure 6,

Figure 13 is a view in section taken along the line XIII—XIII of Figure 12.

Referring now to the drawings, a safety sun-visor of the invention is in the form of a panel comprising a plate-like core and an outer skin. The plate-like core such as 1, 11 or 21 respectively of Figures 1, 2 and 3 conveniently is made of metal, cardboard or moulded plastic material, or of stamped-out plastic material. The sun-visor core 1, 11 or 21 is adapted for mounting on a vehicle so that the panel is able to pivot about an axis 2, 12 or 22 respectively, extending adjacent one edge portion of the panel and core, and located in a first core area.

An opposite or lower edge portion 3, 13 or 23 of the cores 1, 11 or 21 respectively which often is the first portion of the core of the panel to be encountered by a user on impact, is contained in a second core-area which is made sufficiently weaker than the first core-area readily to collapse by breaking or by breaking away from the first core-area

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under impact to absorb impact shock. To this end the second core-area is connected to the first core-area by core-elements 3', 13' or 23' of small section which can readily be broken under impact. This breakage results in a deadening of the impact, followed by rotation of the whole sun-visor.

The small section core elements 3', 13' and 23' are obtained by means of cut-out portions such as 4, 14 and 24 respectively.

It will of course be understood that the constructions of the cores of Figs. 1, 2 and 3 have only been given by way of examples.

The cores 1, 11 and 21 are embedded in moulded plastics or elastic sponge material which thereby forms the outer skin of the sun-visor panel. Polyurethanes are particularly suitable for forming this skin.

Perforations 5, 15, 25 of the cores of Figs. 1, 2 and 3, together with the cut-out portions 26 of the core of Fig. 3, have the purpose of providing anchorage points for the skin material on the core. Any other kind of perforations or recesses in the core may also be provided.

In the embodiment shown in Figs. 6 to 13, the sun-visor has a first core-area in the form of a relatively strong perforated plate element 2' having a rolled over edge region defining a housing 4' for a mounting pivot pin 5', and a second core-area in the form of a plate element 7' of relatively weak material such as cardboard, secured to the perforated plate element 2' so as to be capable of readily breaking away therefrom.

According to a preferred form of construction, the housing 4' for the mounting pivot pin 5' is formed by means of the perforated plate element 2' which has at least one flat portion such as 3a or 3b for fixing to the plate element 7'. The core is covered by moulded plastics or elastic sponge material which projects through the housing perforations to form, inside the housing 4', a friction lining effective to limit pivotal movement of the sun-visor housing about the pivot pin 5'.

A sun-visor of this kind, when it is mounted on the pivot pin 5', lightly grips the said pin by means of the friction lining, which thus enables it to remain in any pre-determined position.

Referring to Figs. 6 to 13 of the drawings, it is seen that the sun-visor 1' includes the perforated plate element 2' which is constituted in this example by a small perforated plate of sheet steel. The element 2' is provided with two flat portions 3a and 3b and a rolled over region defining the cylindrical housing 4' (Figs. 7 and 13), the internal diameter of this housing being greater than that of the pin 5' serving as a pivot for the sun-visor 1', and adapted to be fixed to the body 6' of a vehicle (Fig. 6).

Between the flat portions 3a and 3b of the element 2' is inserted and gripped the

plate element 7' made of cardboard, of a sheet of lignous particles or fibres, or of any other sheet material having a suitable stiffness and low strength. The element 2' and the element 7' are embedded in an outer skin 8' of plastics or sponge material, covering particularly the inner wall of the cylindrical housing 4', to form the friction lining therein which has a diameter less than that of the pin 5'.

In order to obtain the skin 8', the whole core formed by the elements 2' and 7' is arranged inside a mould (not shown), and a spindle-like former (not shown), similar in shape to the pin 5', but having a smaller diameter, is inserted in the cylindrical housing 4'. When plastics material is poured into the mould, this material passes through the perforations in the element 2' and comes into contact in the housing with the surface of the spindle-like former, thus forming, after hardening, a friction lining having an internal diameter less than that of the pin 5'.

When the sun-visor 1' is mounted on the pin 5', this friction lining lightly grips the pin, braking or limiting any movements of rotation of the sun-visor and permitting it to retain a pre-determined position. The forces resulting from the breaking of the pin 5' are transmitted to the element 7' through the intermediary of the element 2' which distributes them over the element 7'.

A sun-visor of this kind is therefore at the same time effective and simple, comprising in fact only three parts, namely the element 7', the perforated plate element 2' and the outer skin 8' of plastics material.

WHAT WE CLAIM IS:—

1. A vehicle safety sun-visor in the form of a panel comprising a plate-like core with an outer skin, said panel being adapted to pivot about an axis located in a first core-area and extending adjacent one edge-portion of the panel, an opposite edge-portion of the core, which extends adjacent a panel edge opposite said axis, being contained in a second core-area which is made weaker than said first core-area readily to collapse by breaking or by breaking away from said first core-area under impact, to absorb impact shock.

2. A safety sun-visor according to claim 1, wherein said second core-area is connected to said first core-area by core elements of small section which can readily be broken.

3. A safety sun-visor according to claim 1 or claim 2, wherein the core is embedded in moulded plastics or elastic sponge material which forms the outer skin of the sun-visor.

4. A safety sun-visor according to claim 3, wherein the core is perforated or cut-away to provide anchorage points for the skin material.

5. A safety sun-visor according to claim 1, wherein the first area of the core is in

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the form of a relatively strong perforated plate element having a rolled over edge region defining a housing for a mounting pivot pin and the second area of the core is a plate element of relatively weak material, such as cardboard, secured to the perforated plate element so as to be capable of readily breaking away therefrom. 15

5. A safety sun-visor according to claim 5, wherein the core is covered by moulded plastics or elastic sponge material to form the outer skin which material projects through the housing perforations to form, inside the housing, a friction lining effective to limit pivotal movement of the sun-visor when the housing is operatively engaged on a mounting pivot pin. 15

6. A safety sun-visor according to claim 10 5, wherein the core is covered by moulded plastics or elastic sponge material to form the outer skin which material projects through the housing perforations to form, inside the housing, a friction lining effective to limit pivotal movement of the sun-visor when the housing is operatively engaged on a mounting pivot pin. 15

7. A safety sun-visor substantially as hereinbefore described and as shown in Figure 1, Figure 2 or Figure 3, or Figures 1, 2 or 3 20 as modified by Figures 4 or 5, or Figures 6 to 13 of the accompanying drawings. 20

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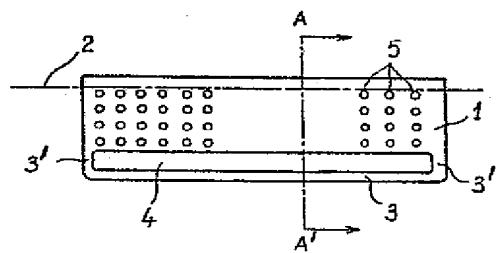


Fig-1

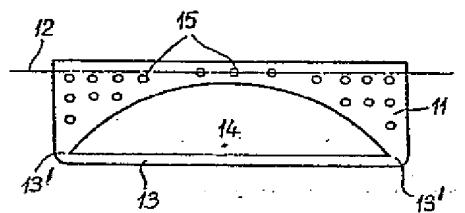


Fig-2

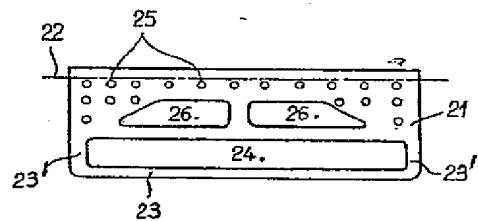


Fig-3

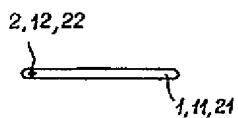


Fig-4



Fig-5

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 2 SHEETS This drawing is a reproduction of
 the Original on a reduced scale
 Sheets 1 & 2

Fig- 1

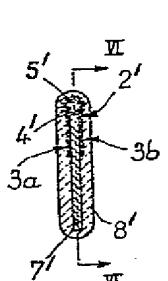


Fig- 7

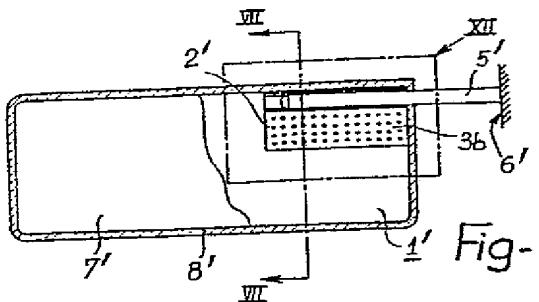


Fig- 6

Fig- 2



Fig- 8

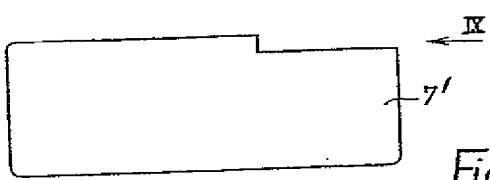


Fig- 9

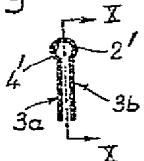


Fig- 11

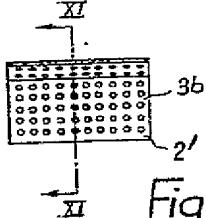


Fig- 10

Fig- 3

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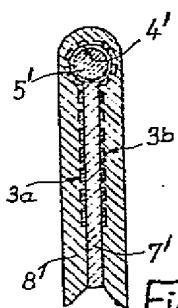


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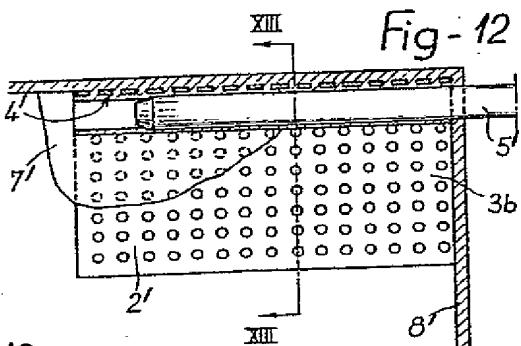


Fig- 12

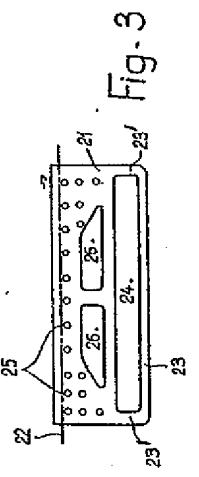
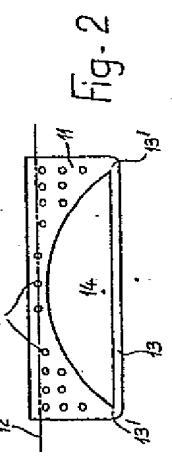
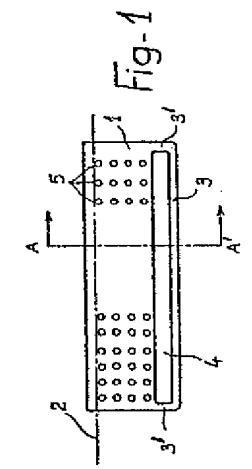


Fig. 4 Fig. 5

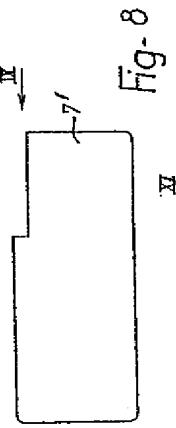
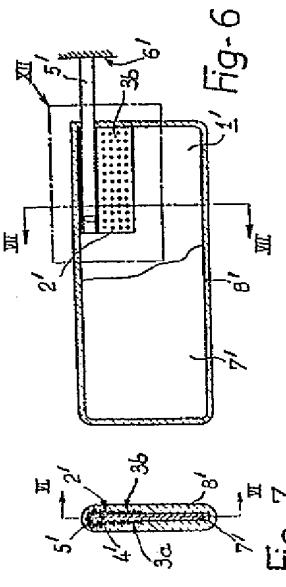


Fig. 6

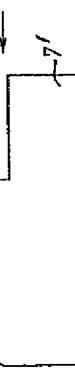


Fig. 8

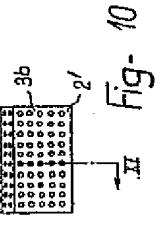


Fig. 9

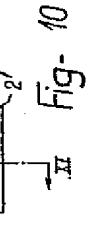


Fig. 10

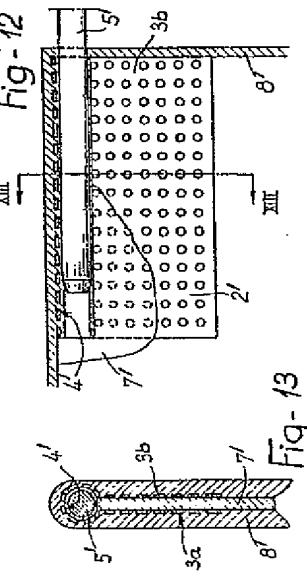


Fig. 12 Fig. 13

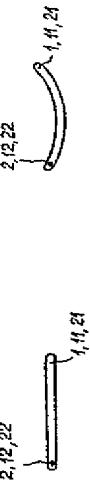


Fig. 14

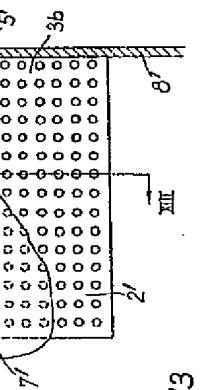


Fig. 15

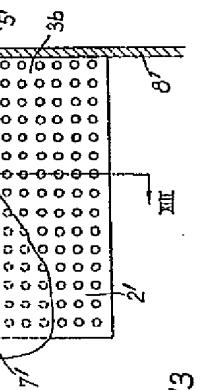


Fig. 16

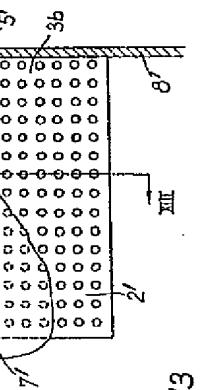


Fig. 17

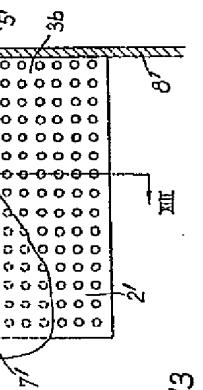


Fig. 18

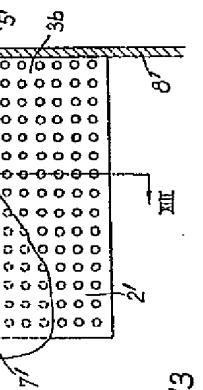


Fig. 19

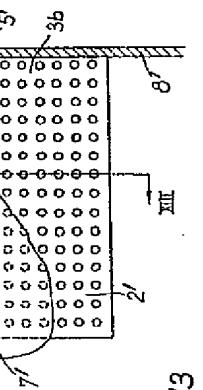


Fig. 20

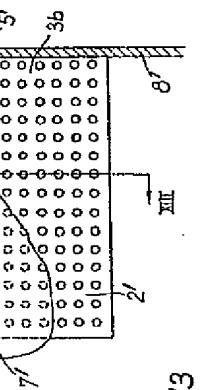


Fig. 21

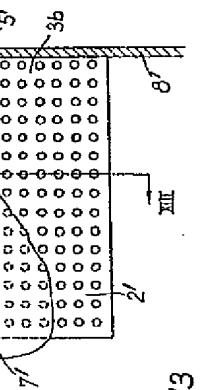


Fig. 22

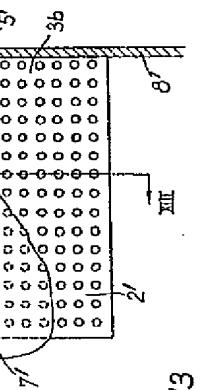


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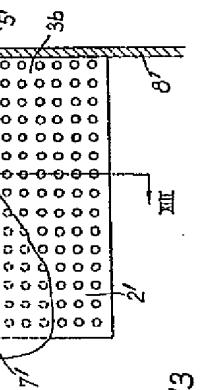


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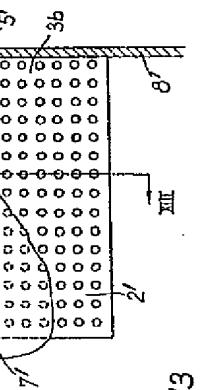


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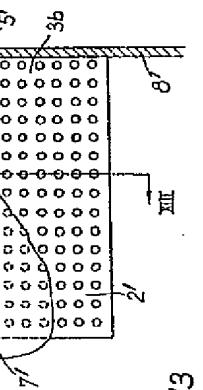


Fig. 26

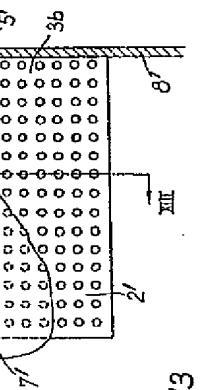


Fig. 27

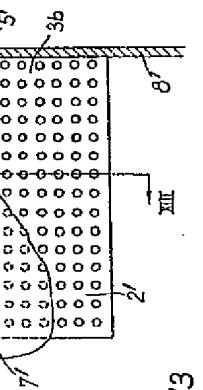


Fig. 28

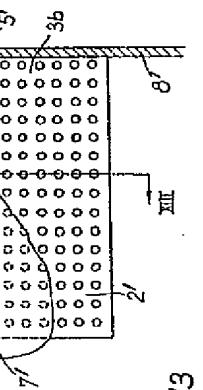


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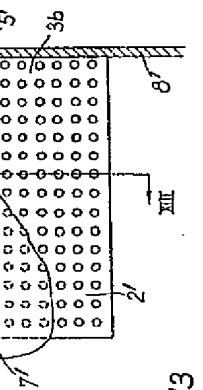


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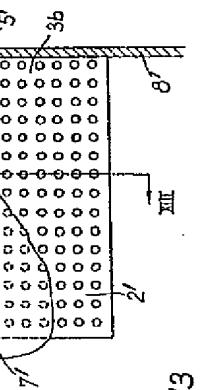


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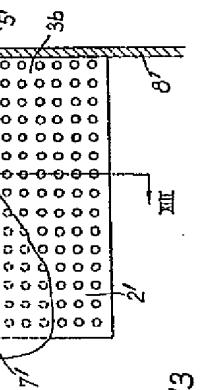


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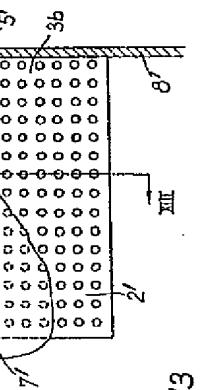


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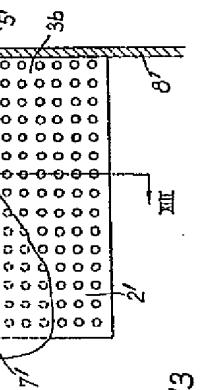


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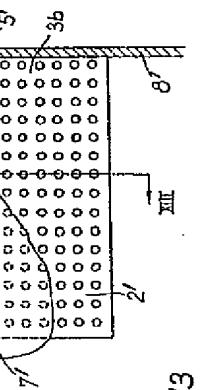


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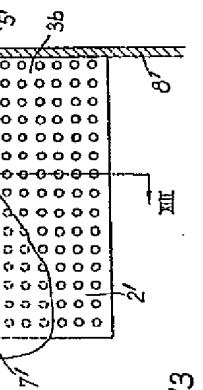


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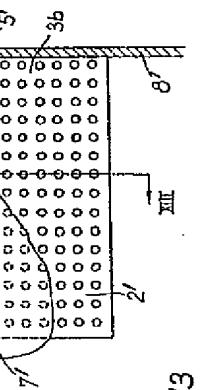


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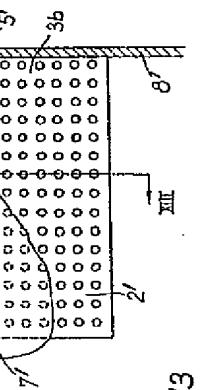


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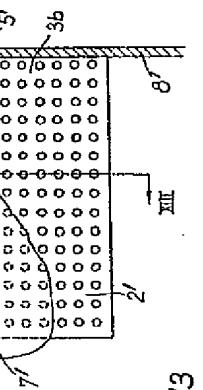


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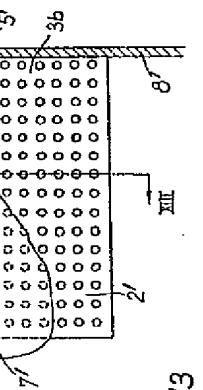


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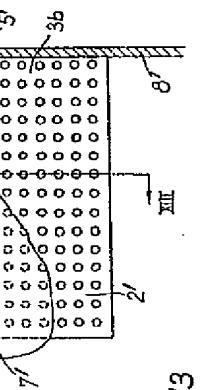


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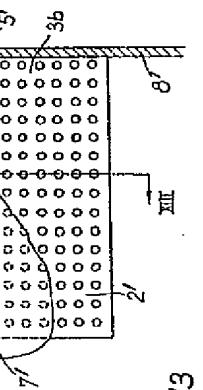


Fig. 42

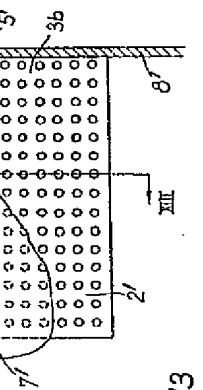


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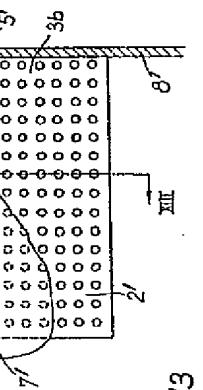


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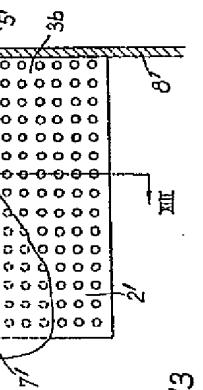


Fig. 45

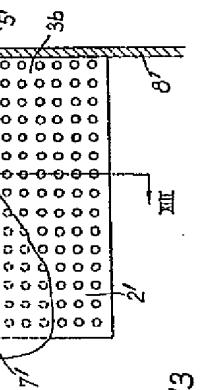


Fig. 46

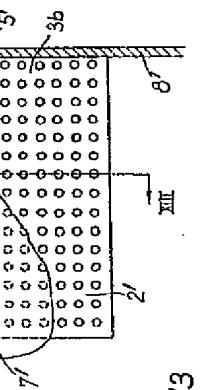


Fig. 47

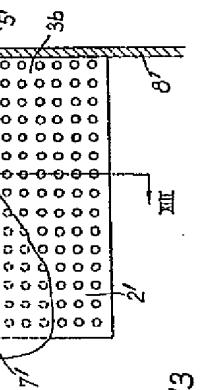


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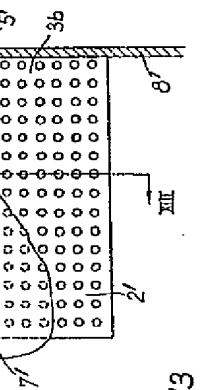


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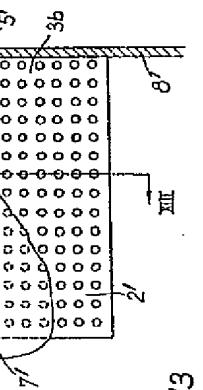


Fig. 50

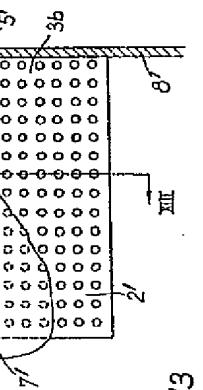


Fig. 51

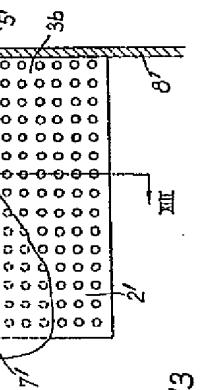


Fig. 52

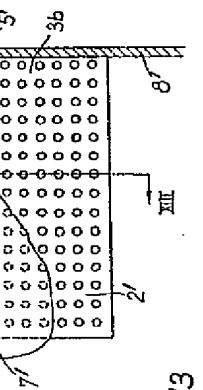


Fig. 53

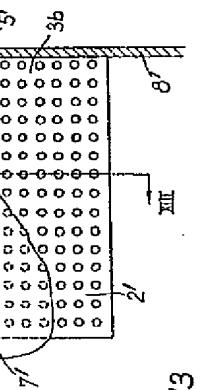


Fig. 54

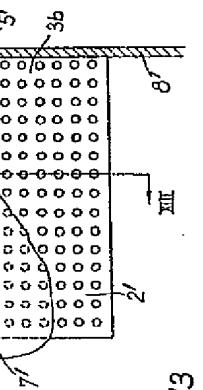


Fig. 55

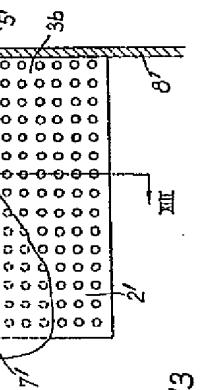


Fig. 56

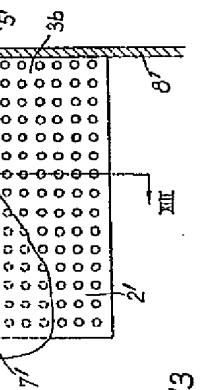


Fig. 57

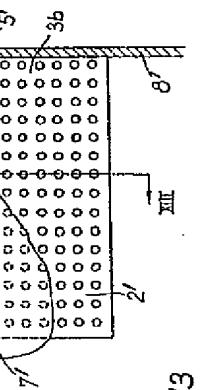


Fig. 58

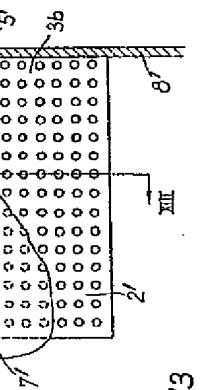


Fig. 59

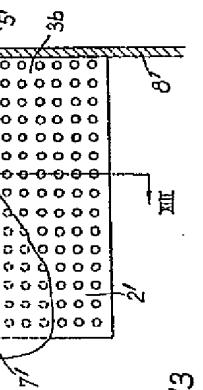


Fig. 60

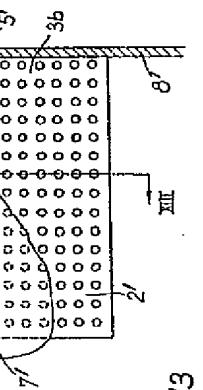


Fig. 61

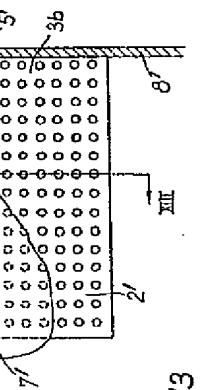


Fig. 62

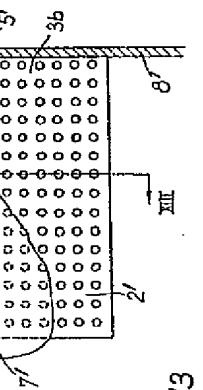


Fig. 63

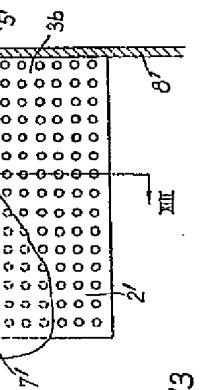


Fig. 64

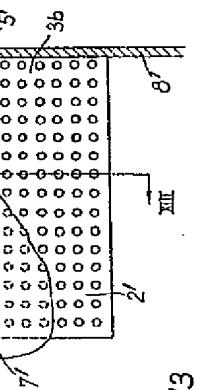


Fig. 65

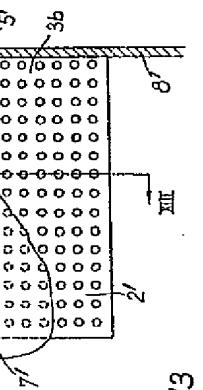


Fig. 66

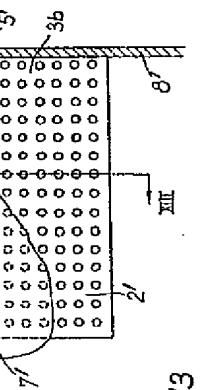


Fig. 67

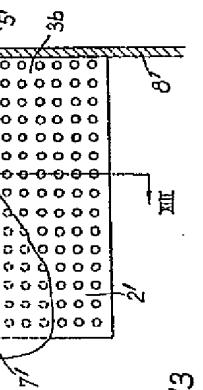


Fig. 68

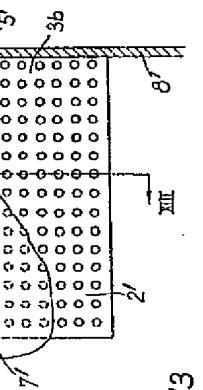


Fig. 69

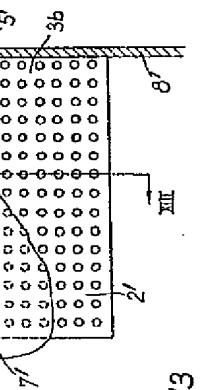


Fig. 70

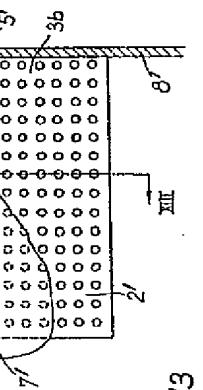


Fig. 71

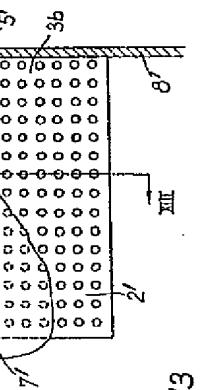


Fig. 72

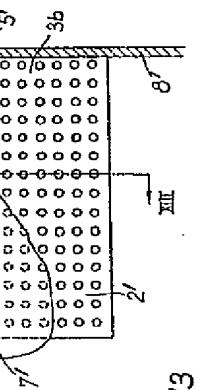


Fig. 73

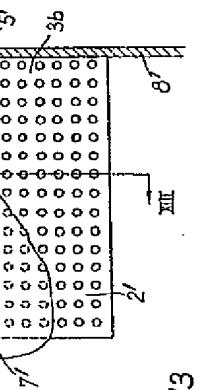


Fig. 74

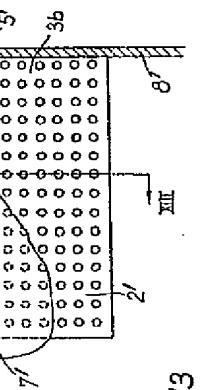


Fig. 75

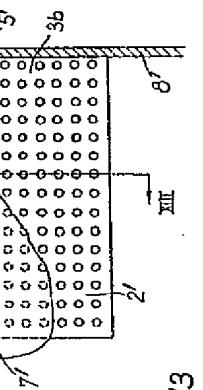


Fig. 76

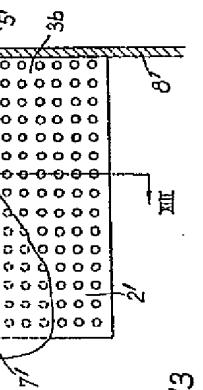


Fig. 77

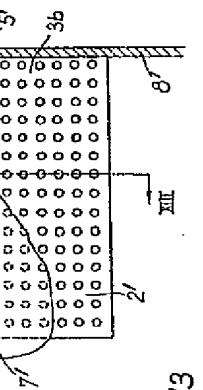


Fig. 78

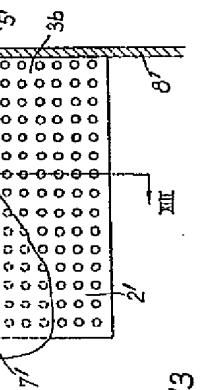


Fig. 79

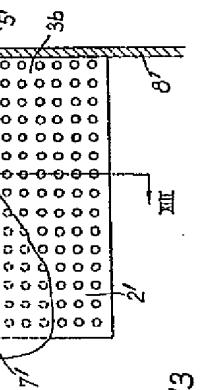


Fig. 80

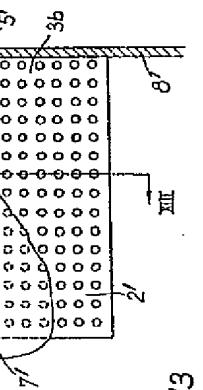


Fig. 81

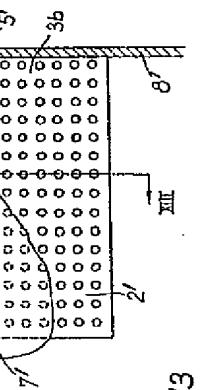


Fig. 82

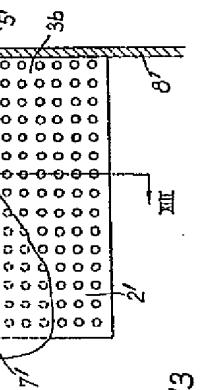


Fig. 83

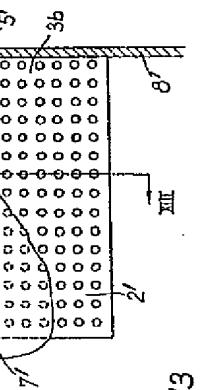


Fig. 84

